



AIR POLLUTION CONTROL DISTRICT OF JEFFERSON COUNTY, KENTUCKY
TITLE V OPERATING PERMIT

Permit No.: 89-97-TV

Co/Plant ID: 0148

Effective Date: 15 January 2000

Expiration Date: 15 January 2005

UTM Northing: 4233.9

UTM Easting: 609.5

SIC: 8062

NAICS: 62211

AFS: 00148

Permission is hereby given by the Air Pollution Control District of Jefferson County to operate equipment located at:

Louisville Medical Center Steam Plant
235 Abraham Flexner Way
Louisville KY 40202-1817

in accordance with the permit application on file with the District and under the conditions stipulated herein. This permit and the authorization to operate the emission units listed herein shall expire on midnight on the expiration date shown above. If a renewal permit is not issued prior to the expiration date, the owner or operator may continue to operate in accordance with the terms and conditions of this permit beyond the expiration date, provided that a complete renewal application is submitted to the District no earlier than eighteen (18) months and no later than one-hundred eighty (180) days prior to the expiration date.

Applicant for Permit: Ed Dusch

Title of Applicant: General Manager

Date Application Received: 15 December 1994

Date Application Administratively Complete: 30 May 1995

Date Public Notice Given: 21 November 1999

Reviewing Engineer (61)

Air Pollution Control Officer

Permit No. 89-97-TV

Co/Plant ID 0148

Table of Contents

Abbreviations and acronyms	3
Preamble	4
General Conditions	5
Emissions Units, Applicable Regulations, Emissions and Operating Limitations; Monitoring, Recordkeeping, Reporting and Testing Requirements	13
Emission Unit U1 - 3 coal fired boilers	13
Emission Unit U2 - 3 coal fired boilers	17
NO _x RACT Plan Requirements	21
Permit Shield	24
Off-Permit Documents	24
Alternative Operating Scenarios	24
Insignificant Activities	24

ABBREVIATIONS AND ACRONYMS

AC	- Additional Condition
APCD	- Air Pollution Control District
ASL	- Adjusted Significant Level
atm	- Atmosphere
BACT	- Best Available Control Technology
Btu	- British Thermal Unit
°C	- Degrees Centigrade
CEMS	- Continuous Emission Monitoring System
CAAA	- Clean Air Act Amendments (15 November 1990)
cf	- Cubic foot
DOE	- District Only Enforceable
°F	- Degrees Fahrenheit
gal	- Gallon
HAP	- Hazardous Air Pollutant
Hg	- Mercury
hr	- hour
lbs	- Pounds
l	- Liter
MACT	- Maximum Available Control Technology
m	- Meter
mg	- Milligram
mm	- Millimeter
MM	- Million
MOCS	- Management of Change System
NAICS	- North American Industrial Classification System
NSR	- New Source Review
NO _x	- Nitrogen oxides
NSPS	- New Source Performance Standards
PM	- Particulate Matter
PM ₁₀	- Particulate matter less than 10 microns
ppm	- Parts per million
PSD	- Prevention of Significant Deterioration
PMP	- Preventive Maintenance Plan
psia	- Pounds per square inch absolute
RACT	- Reasonably Available Control Technology
SIC	- Standard Industrial Classification
SIP	- State Implementation Plan
SO ₂	- Sulfur dioxide
TAL	- Threshold Ambient Limit
TAP	- Toxic Air Pollutant
tpy	- Tons per year
VOC	- Volatile Organic Compound

GENERAL CONDITIONS PREAMBLE

Title V of the Clean Air Act Amendments of 1990 required EPA to create an operating permit program for implementation by state or local air permitting authorities. The purposes of this program are (1) to require an affected company to assume full responsibility for demonstrating compliance with applicable regulations; (2) to capture all of the regulatory information pertaining to an affected company in a single document; and (3) to make permits more consistent with each other.

A company is subject to the Title V program if it meets any of several criteria related to the nature or amount of its emissions. The Title V operating permit specifies what the affected company is, how it may operate, what its applicable regulations are, how it will demonstrate compliance, and what is required if compliance is not achieved. In Jefferson County, Kentucky, the Air Pollution Control District (APCDJC) is responsible for issuing Title V permits to affected companies and enforcing local regulations and delegated federal and state regulations. EPA may enforce federal regulations but not "District Only Enforceable Regulations".

Title V offers the public an opportunity to review and comment on a company's draft permit. It is intended to help the public understand the company's compliance responsibility under the Clean Air Act. Additionally, the Title V process provides a mechanism to incorporate new applicable requirements. Such requirements are available to the public for review and comment before they are adopted.

Title V Permit general conditions define requirements which are generally applicable to all Title V companies under the jurisdiction of APCDJC. This avoids repeating these requirements in every section of the company's Title V permit. Company-specific conditions augment the general conditions as necessary; these appear in the sections of the permit addressing individual emission units or emission points.

The general conditions include references to regulatory requirements that may not currently apply to the company, but which provide guidance for potential changes at the company or in the regulations during the life of the permit. Such requirements may become applicable if the company makes certain modifications or a new applicable requirement is adopted.

When the applicability of a section or subpart of a regulation is unclear, a clarifying citation will be made in the company's Title V permit at the emission unit/point level. Comments may also be added at the emission unit/point level to give further clarification or explanation.

The company's Title V permit may include a list of "insignificant activities" for informational purposes. By definition, "insignificant activities" identified by the company in its permit application and approved by the District are not subject to any applicable requirements, such as monitoring, recordkeeping, or reporting.

GENERAL CONDITIONS

1. **Compliance** - The owner or operator shall comply with all applicable requirements and with all terms and conditions of this permit. Any noncompliance shall constitute a violation of the Act, State and District regulations and shall cause the source to be subject to enforcement actions including, but not limited to, the termination, revocation and reissuance, or revision of this permit, or denial of a permit application to renew this permit. Notwithstanding any other provision in the Jefferson County portion of the Kentucky SIP approved by EPA, any credible evidence may be used for the purpose of establishing whether the owner or operator is in compliance with, has violated, or is in violation of any such plan. (Regulation 2.16, sections 4.1.3, 4.1.13.1 and 4.1.13.7)
2. **Compliance Certification** - The owner or operator shall certify, annually or more frequently if required in applicable regulations, compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. This certification shall meet the requirements of Regulation 2.16, sections 3.5.11 and 4.3.5. The owner or operator shall submit the annual compliance certification directly to the following address as well as to the District, as set forth in Regulation 2.16, section 4.3.5.4:

***US EPA - Region IV
Air Enforcement Branch
Atlanta Federal Center
61 Forsyth Street
Atlanta, GA 30303-8960***

3. **Compliance Schedule** - A compliance schedule must meet the requirements of Regulation 2.16, section 3.5.9.5. The owner or operator shall submit a schedule of compliance for each emission unit that is not in compliance with all applicable requirements. A schedule of compliance shall be supplemental to, and shall not condone noncompliance with, the applicable requirements on which it is based. For each schedule of compliance, the owner or operator shall submit certified progress reports at least semi-annually, or at a more frequent period if specified in an applicable requirement or by the District in accordance with Regulation 2.16 section 4.3.4. The progress reports shall contain:
 - a. Dates for achieving the activities, milestones, or compliance required in the schedule of compliance, and dates when activities, milestones, or compliance were achieved.
 - b. An explanation of why dates in the schedule of compliance were not or will not be met, and preventive or corrective measures adopted.

4. **Duty to Supplement or Correct Application** - If the owner or operator fails to submit relevant facts or has submitted incorrect information in the permit application, it shall, upon discovery of the occurrence, promptly submit the supplementary facts or corrected information in accordance with Regulation 2.16, section 3.4.
5. **Emergency Provision**
 - a. An emergency shall constitute an affirmative defense to an enforcement action brought for noncompliance with technology-based emission limitations. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - (I) An emergency occurred and that the owner or operator can identify the cause of the emergency.
 - (ii) The permitted facility was at the time being properly operated.
 - (iii) During the period of the emergency the owner or operator expeditiously took all reasonable steps, consistent with safe operating practices, to minimize levels of emissions that exceeded the emission standards or other requirements in this permit.
 - (iv) The owner or operator submitted notice meeting the requirements of Regulation 1.07 of the time when emissions limitations were exceeded because of the emergency. This notice must fulfill the requirement of this condition, and must contain a description of the emergency, any steps taken to mitigate emissions, and any corrective actions taken.
 - b. In an enforcement proceeding, the owner or operator seeking to establish the occurrence of an emergency has the burden of proof.
 - c. This condition is in addition to any emergency or upset provision contained in an applicable requirement.
(Regulation 2.16, sections 4.7.1 through 4.7.4)
6. **Emission Fees Payment Requirements** - The owner or operator shall pay annual emission fees in accordance with Regulation 2.08. Failure to pay the emissions fees when due shall constitute a violation of District Regulations. Such failure is subject to penalties and an increase in the fee of an additional 5% per month up to a maximum of 25% of the original amount due. In addition, failure to pay emissions fees within 60 days of the due date shall

automatically suspend this permit to operate until the fee is paid or a schedule for payment acceptable to the District has been established. (Regulation 2.08, section 1.3)

7. **Emission Offset Requirements** - The owner or operator shall comply with the requirements of Regulation 2.04.
8. **Enforceability Requirements** - Except for the conditions that are specifically designated as "District Only Enforceable Conditions", all terms and conditions of this permit, including any provisions designed to limit a source's potential to emit, are enforceable by EPA and citizens as specified under the Act. (Regulation 2.16, sections 4.2.1 and 4.2.2)
9. **Enforcement Action Defense**
 - a. It shall not be a defense for the owner or operator in an enforcement action that it would have been necessary for the owner or operator to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
 - b. The owner or operator's failure to halt or reduce activity may be a mitigating factor in assessing penalties for noncompliance if the health, safety or environmental impacts of halting or reducing operations would be more serious than the impacts of continued operation.
(Regulation 2.16, sections 4.1.13.2 and 4.1.13.3)
10. **Hazardous Air Pollutants and Sources Categories** - The owner or operator shall comply with the applicable requirements of Regulations 5.02 and 5.14.
11. **Information Requests** - The owner or operator shall furnish to the District, within a reasonable time, information requested in writing by the District, to determine whether cause exists for revising, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The owner or operator shall also furnish, upon request, copies of records required to be kept by this permit. (Regulation 2.16, section 4.1.13.6) If information is submitted to the District under a claim of confidentiality, the source shall submit a copy of the confidential information directly to EPA. (Regulation 2.07, section 10.2)
12. **Insignificant Activities** - The owner or operator shall notify the District in a timely manner of any proposed change to an insignificant activity that would require a permit revision. (Regulation 2.16, section 5)

13. **Inspection and Entry** - Upon presentation of credentials and other documents as required by law, the owner or operator shall allow the District or an authorized representative to perform the following during reasonable hours:
- a. Enter the premises to inspect any emissions-related activity or records required in this permit.
 - b. Have access to and copy records required by this permit.
 - c. Inspect facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required by this permit.
 - d. Sample or monitor substances or parameters to assure compliance with this permit or any applicable requirements.
(Regulation 2.16, section 4.3.2)
14. **Monitoring and Related Recordkeeping and Reporting Requirements** - The owner or operator shall comply with the requirements of Regulation 2.16, section 4.1.9. The owner or operator shall submit all required monitoring reports at least once every six months, unless more frequent reporting is required by an applicable requirement. The reporting period shall be January 1st through June 30th and July 1st through December 31st of each calendar year. All reports shall be postmarked by the 60th day following the end of each reporting period. If surrogate operating parameters are monitored and recorded in lieu of emission monitoring, then an exceedance of multiple parameters may be deemed a single violation by the District for enforcement purposes.
15. **Off-permit Documents** - Any applicable requirements, including emission limitations, control technology requirements, or work practice standards, contained in an off-permit document cannot be changed without undergoing the permit revision procedures in Regulation 2.16, Section 5.
16. **Operational Flexibility** - The owner or operator may make changes without permit revision in accordance with Regulation 2.16, section 5.8.
17. **Permit Amendments (Administrative)** - This permit can be administratively amended by the District in accordance with Regulation 2.16, sections 2.3 and 5.4.
18. **Permit Application Submittal** - The owner or operator shall submit a timely and complete application for permit renewal or significant revision. If the owner or operator submits a timely and complete application then the owner or operator's failure to have a permit is not

a violation until the District takes formal action on this permit application. This protection shall cease to apply if, subsequent to completeness determination, the owner or operator fails to submit, by the deadline specified in writing by the District, additional information required to process the application as required by Regulation 2.16, sections 3 and 5.2.

19. **Permit Duration** - This permit is issued for a fixed term of 5 years, in accordance with Regulation 2.16, section 4.1.8.3.
20. **Permit Renewal, Expiration and Application** - Permit renewal, expiration and application procedural requirements shall be in accordance with Regulation 2.16, sections 4.1.8.2 and 5.3. This permit may only be renewed in accordance with section 5.3.
21. **Permit Revisions** - No permit revision shall be required under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in the permit. (Regulation 2.16, section 4.1.16)
22. **Permit Revision Procedures (Minor)** - Except as provided in 40 CFR Part 72, the Acid Rain Program, this permit may be revised in accordance with Regulation 2.16, section 5.5.
23. **Permit Revision Procedures (Significant)** - A source seeking to make a significant permit revision shall meet all the Title V requirements for permit applications, issuance and renewal, in accordance with Regulation 2.16, section 5.7, and all other applicable District Regulations.
24. **Permit Revocation and Termination by the District** - The District may terminate this permit only upon written request of the owner or operator. The District may revoke a permit for cause, in accordance with Regulation 2.16, section 5.11.1.1 through 5.11.1.5. For purposes of Section 5, substantial or unresolved noncompliance includes, but is not limited to:
 - a. Knowingly operating process or air pollution control equipment in a manner not allowed by an applicable requirement or that results in excess emissions of a regulated air pollutant that would endanger the public or the environment.
 - b. Failure or neglect to furnish information, analyses, plans, or specifications required by the District.
 - c. Knowingly making any false statement in any permit application.
 - d. Noncompliance with Regulation 1.07, section 4.2; or

- e. Noncompliance with KRS Chapter 77.
- 25. **Permit Shield** - The permit shield shall apply in accordance with Regulation 2.16, section 4.6.1.
- 26. **Prevention of Significant Deterioration of Air Quality** - The owner or operator shall comply with the requirements of Regulation 2.05.
- 27. **Property Rights** - This permit shall not convey property rights of any sort or grant exclusive privileges in accordance with Regulation 2.16, section 4.1.13.5.
- 28. **Public Participation** - Except for modifications qualifying for administrative permit amendments or minor permit revision procedures, all permit proceedings shall meet the requirements of Regulations 2.07, Section 1; and 2.16, sections 5.1.1.2 and 5.5.4.
- 29. **Reopening For Cause** - This permit shall be reopened and revised by the District in accordance with Regulation 2.16 section 5.9.
- 30. **Reopening for Cause by EPA** - This permit may be revised, revoked and reissued or terminated for cause by EPA in accordance with Regulation 2.16 section 5.10.
- 31. **Risk Management Plan (112(r))** - For each process subject to Section 112(r) of the Act, the owner or operator shall comply with 40 CFR Part 68 and Regulation 5.15.
- 32. **Severability Clause** - The conditions of this permit are severable. Therefore, if any condition of this permit, or the application of any condition of this permit to any specific circumstance, is determined to be invalid, the application of the condition in question to other circumstances, as well as the remainder of this permit's conditions, shall not be affected. (Regulation 2.16, section 4.1.12)
- 33. **Stack Height Considerations** - The owner or operator shall comply with the requirements of Regulation 2.10.
- 34. **Startups, Shutdowns, and Malfunctions Requirements** - The owner or operator shall comply with the requirements of Regulation 1.07.
- 35. **Submittal of Reports, Data, Notifications, and Applications**

Permit No. 89-97-TV

Co/Plant ID 0148

- a. Applications, reports, test data, monitoring data, compliance certifications, and any other document required by this permit as set forth in Regulation 2.16 sections 3.1, 3.4, 3.5, 4.1.13.6, 5.8.5 and 5.11.7 shall be submitted to:

***Air Pollution Control District of Jefferson County
850 Barret Ave
Louisville, KY 40204-1745***

- b. Documents which are specifically required to be submitted to EPA as set forth in Regulation 2.16 sections 3.3, and 5.8.5 shall be mailed to EPA at the following address:

***US EPA - Region IV
APTMD - 12th floor
Atlanta Federal Center
61 Forsyth Street
Atlanta, GA 30303-3104***

36. **Other Applicable Regulations** - The owner or operator shall comply with all applicable requirements of the following regulations:

FEDERALLY ENFORCEABLE REGULATIONS	
Regulation	Title
1.01	General Application of Regulations and Standards
1.02	Definitions
1.03	Abbreviations and Acronyms
1.04	Performance Tests
1.05	Compliance with Emission Standards and Maintenance Requirements
1.06	Source Self-Monitoring and Reporting
1.07	Emissions During Startups, Shutdowns, Malfunctions, and Emergencies
1.08	Administrative Procedures
1.09	Prohibition of Air Pollution
1.10	Circumvention
1.11	Control of Open Burning

FEDERALLY ENFORCEABLE REGULATIONS	
Regulation	Title
1.14	Control of Fugitive Particulate Emissions
2.01	General Application
2.02	Air Pollution Regulation Requirements and Exemptions
2.03	Permit Requirements - Non-Title V Construction and Operating Permits and Demolition/Renovation Permits
2.07	Public Notification for Title V, PSD, and Offset Permits; SIP Revisions; and Use of Emission Reduction Credits
2.09	Cause for Permit Suspension
2.10	Stack Height Considerations
2.11	Air Quality Model Usage
2.16	Title V Operating Permits
4.01	General Provisions for Emergency Episodes
4.02	Episode Criteria
4.03	General Abatement Requirements
4.07	Episode Reporting Requirements
5.01	General Provisions (for Hazardous Air Pollutants)
5.03	Potential Hazardous Emissions
6.01	General Provisions (for <i>Existing Affected Facilities</i>)
6.02	Emission Monitoring for Existing Sources
7.01	General Provisions (for <i>New Affected Facilities</i>)

DISTRICT ONLY ENFORCEABLE REGULATIONS	
Regulation	Title
1.12	Control of Nuisances
1.13	Control of Objectionable Odors in the Ambient Air
2.08	Emissions Fees, Permit Fees, and Permit Renewal Procedures
8.03	Commuter Vehicle Testing Requirements

Permit No. 89-97-TV

Co/Plant ID 0148

Emission Unit Number U1

EMISSION UNIT DESCRIPTION:

Coal-fired boilers #1, #2, #3

EMISSION UNIT APPLICABLE REGULATIONS:

Regulation	Subject	Sections
2.04	Construction or Modification of Major Sources In or Impacting Upon Non-Attainment Areas (Emission Offset Requirements)	1, 2, 3, 4, 5, 6, 7, 8, 9, 10
6.07	Standards of Performance for Existing Indirect Heat Exchangers	1, 2, 3, 4
6.42	Reasonably Available Control Technology Requirements for Major Volatile Organic Compound and Nitrogen Oxides Emitting Facilities	1, 2, 3, 4.3, 5

EMISSION UNIT ALLOWABLE EMISSIONS:

PM 0.37 lb/MMBTU

SO₂ 2.1 lb/MMBTU

NO_x See additional condition # 5

EMISSION POINT E1:

One boiler, rated heat input capacity of 56 MM Btu/hr, installed in 1954. Includes control system C1, one 25 tube multi-cyclone. Vented out stack S1.

EMISSION POINT E2:

One boiler, rated heat input capacity of 56 MM Btu/hr, installed in 1954. This boiler is also able to combust natural gas. Includes control system C2, one 25 tube multi-cyclone. Vented out stack S1.

EMISSION POINT E3:

One boiler, rated heat input capacity of 56 MM Btu/hr, installed in 1954. Includes control system C3, one 25 tube multi-cyclone. Vented out stack S1.

ADDITIONAL CONDITIONS

Emission Unit/Point U1

The owner or operator shall:

1. Per District Regulation 2.04, not exceed the approved limits, which are a maximum of 0.85% sulfur and 8% ash in the coal combusted. The total heat input for the whole plant is limited to 362 MM Btu/hr. The 362 MM Btu/hr limit will be accomplished by not operating more than four boilers at the same time.
2. Per District Regulation 2.16, section 4.1.9.1.2, monitor and record monthly fuel usage, hours of operation for each boiler, and fuel being combusted in each boiler. Purchase records shall be kept that show heating value, ash, and sulfur content for the coal. Records shall be maintained to demonstrate compliance with additional condition number 1 utilizing this information. These records shall show calculated hourly heat input. The above records shall be available upon request by the District.
3. Per District Regulation 6.07, section 3, not cause the emission into the open air of particulate matter from any indirect heat exchanger which is greater than 20% opacity, except for:
 - a. emissions into the open air of particulate matter from any indirect heat exchanger during building a new fire, cleaning the fire box, or blowing soot for a period or periods aggregating not more than ten minutes in any 60 minutes which are less than 40% opacity.
 - b. emissions from waterwall spreader-stoker indirect heat exchangers during startup operations if the emissions do not exceed the following:
 1. first 30 minutes - 80% opacity;
 2. next hour - 60% opacity; and
 3. next 2 ½ hours - 40% opacity.
 - c. emissions up to 40% opacity from all other waterwall indirect heat exchangers for any 30-minute period during startup operations.
4. Per District Regulation 2.16, section 4.1.9.1.2, when coal is being combusted conduct daily surveys. The owner or operator shall conduct a six minute visible emissions survey of all emission points with a maximum of three emission points being observed

simultaneously. At emission points where visible emissions are observed, a certified opacity reader shall perform a Method 9 for stack emissions within one working day. Any Method 9 visible emissions tests shall be conducted according to 40 CFR 60, Appendix A. All visible emissions surveys and tests shall be conducted during normal operation of the emission unit. The owner or operator shall maintain records of the results of all visible emissions surveys and tests. Records of the results of any visible emissions survey shall include the date and time of the survey, the name of the person conducting the survey, and whether or not visible emissions were observed. If an emission unit is not operated during that month then no visible emissions survey or test needs to be performed.

5. Per District Regulation 6.42, section 4.3, comply with the NO_x RACT Plan that was adopted by Board Order 11/08/1999. (See page 23)
6. Per District Regulation 2.16, section 4.1.9.1.2, visually inspect, on a monthly basis, the tube multi-cyclones (C1-C3), for any deterioration in the device. Any noted material failures shall have repairs instituted within 7 days after the discovery.
7. Per District Regulation 2.16, section 4.1.9.3.1, clearly identify all deviations from permit requirements in the semi-annual reports. All reports shall be certified by a responsible official as defined in District Regulation 2.16, section 2.36. If no deviations occur in that reporting period then the owner or operator shall report a negative declaration for each of the following requirements. The owner or operator shall report semi-annually, the following:
 - a. For control devices C1-C3:
 - (1) Emission Unit ID number and Control ID number.
 - (2) The beginning and ending date of the reporting period.
 - (3) Number and type of repairs instituted during the reporting period.
 - (4) Description of each corrective action.
 - b. For opacity:
 - (1) Emission Unit ID number, Stack ID number, and/or Emission point ID number.
 - (2) The beginning and ending date of the reporting period.
 - (3) The date, time and results of each Visible Emissions survey conducted.
 - (4) The date, time and results of each Method 9 conducted.
 - (5) Description of each corrective action taken pursuant to Additional Condition 4.

Permit No. 89-97-TV

Co/Plant ID 0148

- c. For Emission points subject to District Regulation 6.07:
- (1) Emission Unit ID number and Emission point ID number.
 - (2) The beginning and ending date of the reporting period.
 - (3) Identification of all periods of exceedances of the PM or SO₂ emission standard for each emission point including the quantity of excess emissions.
 - (4) Description of each corrective action taken.

Emission Unit Number U2

EMISSION UNIT DESCRIPTION:

Permit No. 89-97-TV

Co/Plant ID 0148

Coal-fired boilers #4, #5, #6

EMISSION UNIT APPLICABLE REGULATIONS:

Regulation	Subject	Sections
2.04	Construction or Modification of Major Sources In or Impacting Upon Non-Attainment Areas (Emission Offset Requirements)	1, 2, 3, 4, 5, 6, 7, 8, 9, 10
6.07	Standards of Performance for Existing Indirect Heat Exchangers	1, 2, 3, 4
6.42	Reasonably Available Control Technology Requirements for Major Volatile Organic Compound and Nitrogen Oxides Emitting Facilities	1, 2, 3, 4.3, 5
7.06	Standards of Performance for New Indirect Heat Exchangers	1, 2, 3.1, 4.1.4, 4.2, 5.1.1, 8

EMISSION UNIT ALLOWABLE EMISSIONS:

PM 0.32 lb/MMBTU

SO₂ 1.7 lb/MMBTU

NO_x See additional condition # 6

EMISSION POINT E4:

One boiler, rated heat input capacity of 102 MM Btu/hr, installed in 1969. Includes control system C4, one 48 tube multi-cyclone. Vented out stack S2.

EMISSION POINT E5:

One boiler, rated heat input capacity of 102 MM Btu/hr, installed in 1969. Includes control system C5, one 48 tube multi-cyclone. Vented out stack S2.

EMISSION POINT E6:

One boiler, rated heat input capacity of 100 MM Btu/hr, installed in 1982. Includes control system C6, one 48 tube multi-cyclone and control system C7, one 576 bag baghouse. Vented out stack S2.

ADDITIONAL CONDITIONS

Emission Unit/Point U2

The owner or operator shall:

1. Per District Regulation 2.04, not exceed the approved limits, which are a maximum of 0.85% sulfur and 8% ash in the coal combusted. The total heat input for the whole plant is limited to 362 MM Btu/hr. The 362 MM Btu/hr limit will be accomplished by not operating more than four boilers at the same time.
2. Per District Regulation 2.16, section 4.1.9.1.2, monitor and record monthly fuel usage, hours of operation for each boiler, and fuel being combusted in each boiler. Purchase records shall be kept that show heating value, ash, and sulfur content for the coal. Records shall be maintained to demonstrate compliance with additional condition number 1 utilizing this information. These records shall show calculated hourly heat input. The above records shall be available upon request by the District.
3. Per District Regulation 7.06, section 4.2, not cause, for emission point E6, emissions which exhibit greater than 20% opacity except:
 - a. for indirect heat exchangers with a heat input capacity of less than 250 million BTU/hr, a maximum of 40% opacity shall be permissible for not more than two consecutive minutes in any 60 consecutive minutes;
 - b. for indirect heat exchangers with heat input capacity of less than 250 million BTU/hr, a maximum of 40% opacity shall be permissible for not more than six consecutive minutes during cleaning the fire box or blowing soot; or
 - c. for emissions from an indirect heat exchanger during building a new fire for the period required to bring the boiler up to operating conditions provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer's recommendations.
4. Per District Regulation 2.16, section 4.1.9.1.2, when coal is being combusted conduct daily surveys. The owner or operator shall conduct a six minute visible emissions survey of all emission points with a maximum of three emission points being observed simultaneously. At emission points where visible emissions are observed, a certified opacity reader shall perform a Method 9 for stack emissions within one working day. Any Method 9 visible emissions tests shall be conducted according to 40 CFR 60, Appendix A. All visible emissions surveys and tests shall be conducted during normal operation of the

emission unit. The owner or operator shall maintain records of the results of all visible emissions surveys and tests. Records of the results of any visible emissions survey shall include the date and time of the survey, the name of the person conducting the survey, and whether or not visible emissions were observed. If an emission unit is not operated during that month then no visible emissions survey or test needs to be performed.

5. Per District Regulation 6.07, section 3, not cause, for emission points E4 and E5, the emission into the open air of particulate matter from any indirect heat exchanger which is greater than 20% opacity, except for:
 - a. emissions into the open air of particulate matter from any indirect heat exchanger during building a new fire, cleaning the fire box, or blowing soot for a period or periods aggregating not more than ten minutes in any 60 minutes which are less than 40% opacity.
 - b. emissions from waterwall spreader-stoker indirect heat exchangers during startup operations if the emissions do not exceed the following:
 1. first 30 minutes - 80% opacity;
 2. next hour - 60% opacity; and
 3. next 2 ½ hours - 40% opacity.
 - c. emissions up to 40% opacity from all other waterwall indirect heat exchangers for any 30-minute period during startup operations.
6. Per District Regulation 6.42, section 4.3, comply with the NO_x RACT Plan that was adopted by Board Order 11/08/1999. (See page 23)
7. Per District Regulation 2.16, section 4.1.9.1.2, monitor and record the pressure drop across baghouse C7 for proper operation. Normal operating range is 3 inches to 5 inches. The owner or operator shall clean this unit when the pressure drop is 6 inches. The unit alarm system shall be set to sound when the pressure drop reaches 7 inches.
8. Per District Regulation 2.16, section 4.1.9.1.2, visually inspect, on a monthly basis, the tube multi-cyclones (C4-C6), for any deterioration in the device. Any noted material failures shall have repairs instituted within 7 days after discovery.
9. Per District Regulation 2.16, section 4.1.9.3.1, clearly identify all deviations from permit requirements in the semi-annual reports. All reports shall be certified by a responsible official as defined in District Regulation 2.16, section 2.36. If no deviations occur in that

reporting period then the owner or operator shall report a negative declaration for each of the following requirements. The owner or operator shall report semi-annually the following:

- a. For control devices C4-C7:
 - (1) Emission Unit ID number and Control ID number.
 - (2) The beginning and ending date of the reporting period.
 - (3) Identification of what is being monitored.
 - (4) Number and type of repairs instituted during the reporting period.
 - (5) Description of each corrective action taken.

- b. For opacity:
 - (1) Emission Unit ID number, Stack ID number, and/or Emission point ID number.
 - (2) The beginning and ending date of the reporting period.
 - (3) The date, time and results of each Visible Emissions survey conducted.
 - (4) The date, time and results of each Method 9 conducted.
 - (5) Description of each corrective action taken pursuant to Additional Condition 4.

- c. For Emission points subject to District Regulation 6.07 and 7.06:
 - (1) Emission Unit ID number and Emission point ID number.
 - (2) The beginning and ending date of the reporting period.
 - (3) Identification of all periods of exceedances of the PM or SO₂ emission standard for each emission point including the quantity of excess emissions.
 - (4) Description of each corrective action taken.

COMMENTS

- 1. Emission point E6 is subject to District Regulation 7.06, as operation commenced after April 19, 1972.
- 2. Emission points E4 and E5 are subject to District Regulation 6.07, as operation commenced before April 9, 1972.

NO_x RACT Plan

1. The oxides of nitrogen (NO_x, expressed as NO₂) emission from each of Boiler #2, Boiler #4, and Boiler #5 while natural gas is combusted in that boiler shall not exceed 0.20 pound per million Btu of heat input.
2. The NO_x (expressed as NO₂) emission from each of Boiler #4, Boiler #5, and Boiler #6 while coal is combusted in that boiler shall not exceed 0.50 pound per million Btu of heat input.
3. The Louisville Medical Center Steam Plant (Medical Center) shall conduct an annual performance test for NO_x for each of Boiler #2, Boiler #4, Boiler #5, and Boiler #6. If the requirements of Regulation 6.42 *Reasonably Available Control Technology Requirements for Major Volatile Organic Compound- and Nitrogen Oxides-Emitting Facilities* section 5.1 are met, and subject to the annual performance test schedule reinstitution provision, performance testing may be done on a biennial schedule. Performance testing shall meet the following requirements:
 - A. Emissions concentrations and the mass determinations shall be obtained using Reference Methods of 40 CFR Part 60 Appendix A. The following methods shall be used:
 - (1) Method 1 or 1A, which furnishes guidance in site and traverse selection for sampling velocity at traverse points in stationary sources,
 - (2) Method 2, 2A, 2B, 2C, 2D, 2E, 2F, 2G, or 2H, which applies to measurements of gas volumetric flow rates,
 - (3) Method 3, 3A, 3B, or 3C, which is applicable for determining the concentrations of one or more of the following gases: carbon dioxide, O₂, CO, nitrogen, and methane,
 - (4) Method 4, which determines the moisture content in stack gases, and
 - (5) Method 7, 7A, 7B, 7C, 7D, or 7E, which provides the analytical method for determining the concentration of NO_x emissions from stationary sources.
 - B. The use of other Reference Methods that are added to 40 CFR Part 60 Appendix A, alternative tests, or modifications to the Reference Methods listed in NO_x RACT Plan Element (Element) No. 3.A. may be proposed by the Medical Center as part of the testing plan required by Element No. 3.D. Such methods may be used if approved in writing by the District.

- C. Performance testing shall meet the requirements of Regulation 1.04 *Performance Tests* that are not addressed in this Element.
 - D. A notification of intent to conduct a performance test shall be submitted to the District at least 25 working days in advance of the projected starting date for the performance test. The notification shall include the proposed test methods to be used.
 - E. If a pre-test conference to discuss the proposed test methods is deemed necessary by the District, a pre-test conference shall be arranged by District personnel.
 - F. At least 10 working days' prior notice of the scheduled starting date for the performance test shall be provided to the District.
 - G. A performance test report shall be submitted to the District within 60 days of completion of performance testing. The report shall include the calculations used to determine emissions. The NO_x emission rate shall be expressed in both pounds per hour and pounds per million Btu formats. The raw data shall be retained by the Medical Center for a minimum of 5 years and made available to the District upon request. Selected portions of the raw data used to calculate the emissions shall be included in the report in a format provided by the District.
4. Neither Boiler #1 nor Boiler #3 shall have a seasonal capacity factor greater than 10.0%. The term "seasonal capacity factor" means the ratio between the actual heat input to a boiler from fuel combusted during the period April 1 through October 31 and the potential heat input to the boiler had it been operated for 24 hours per day for each day during that period at the maximum steady state design heat input capacity. The maximum heat input capacity provided by the manufacturer shall be used unless the Medical Center determines the maximum heat input capacity using the heat loss method described in sections 5 and 7.3 of the ASME *Power Test Codes* 4.1.
5. The Medical Center shall make a record of the type and amount of fuel combusted during each day of operation of Boiler #1 or Boiler #3 during the period April 1 through October 31. The Medical Center shall, at the end of each month during this period, calculate and record, for each of Boiler #1 and Boiler #3, the seasonal capacity factor based upon the season to date. Each record shall be maintained for a minimum of 5 years and made available to the District upon request.
6. The Medical Center shall keep a record identifying all deviations from the requirements of this NO_x RACT Plan and shall submit to the District a written report of all deviations that occurred during the preceding semi-annual period. Semi-annual periods shall run from

January 1 to June 30 and July 1 to December 31. The report shall contain the following information:

- A. The boiler number,
- B. The beginning and ending date of the reporting period,
- C. Identification of all periods during which a deviation occurred,
- D. A description, including the magnitude, of the deviation,
- E. If known, the cause of the deviation, and
- F. A description of all corrective actions taken to abate the deviation.

If no deviation occurred during the semi-annual period, the report shall contain a negative declaration. Each report shall be submitted within 60 days following the end of the semi-annual period.

7. In lieu of the requirements in this NO_x RACT Plan, the Medical Center may comply with alternative requirements regarding emission limitations, equipment operation, test methods, monitoring, recordkeeping, or reporting, provided the following conditions are met:
- A. The alternative requirements are established and incorporated into an operating permit pursuant to a Title V Operating Permit issuance, renewal, or significant permit revision process as established in Regulation 2.16,
 - B. The alternative requirements are consistent with the streamlining procedures and guidelines set forth in section II.A. of *White Paper Number 2 for Improved Implementation of the Part 70 Operating Permits Program*, March 5, 1996, U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards. The overall effect of compliance with alternative requirements shall consider the effect on an intrinsic basis, such as pounds per million Btu,
 - C. The U.S. Environmental Protection Agency (EPA) has not objected to the issuance, renewal, or revision of the Title V Operating Permit, and either
 - D. If the public comment period preceded the EPA review period, then the District had transmitted any public comments concerning the alternative requirements to EPA with the proposed permit, or
 - E. If the EPA and public comment periods ran concurrently, then the District had transmitted any public comments concerning the alternative requirements to EPA no later than 5 working days after the end of the public comment period.

The District's determination of approval of any alternative requirements is not binding on EPA. Noncompliance with any alternative requirement established pursuant to the Title V Operating Permit process constitutes a violation of the NO_x RACT Plan.

PERMIT SHIELD

The owner or operator is hereby granted a permit shield that shall apply as long as the owner or operator demonstrates ongoing compliance with all the conditions of this permit. Compliance with the conditions of this permit shall be deemed compliance with all applicable requirements of the regulations cited in this permit as of the date of issuance per District Regulation 2.16, section 4.6.1.1.

OFF PERMIT DOCUMENTS

There are no off permit documents associated with this Title V permit.

ALTERNATIVE OPERATING SCENARIO

The company requested no alternative operating scenario in its Title V application.

DISTRICT ONLY ENFORCEABLE CONDITIONS

There are no District only enforceable conditions applicable to this permitted source.

INSIGNIFICANT ACTIVITIES

Description	Basis	Quantity
Water Bath Fly Ash Hopper	No regulated emissions	1
Emergency Generator (IC engine)	Reg 2.02 sec 2.2	1
#2 Fuel Oil Storage Tank (2000 gal)	Reg 2.02 sec 2.3.9.2	1